STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

CLEANUP AND ABATEMENT ORDER NO. R4-2003-0132

FOR

BROWNING-FERRIS INDUSTRIES OF CALIFORNIA, INC.
(SUNSHINE CANYON CITY SIDE LANDFILL)
(File No. 58-076)

The California Regional Water Quality Control Board, Los Angeles Region (Regional Board) requires Browning-Ferris Industries of California, Inc., to assess, monitor, clean-up and abate the impacts to groundwater by pollutants released from the Sunshine Canyon City Side Landfill.

The Regional Board Executive Officer (Executive Officer) finds:

BACKGROUND

1. Browning-Ferris Industries of California, Inc. (BFI), an Allied Waste Industries company, owns and operates the Sunshine Canyon Landfill (Facility) at 14747 San Fernando Road, Sylmar, California. The Facility is located at the border between the City of Los Angeles and the unincorporated territory of Los Angeles County, to the west of the intersection of the Golden State (I-5) and the Antelope Valley (SR-14) Freeways (Figure 1).

2. The Facility includes two separate Class III municipal solid waste (MSW) management units, referred to as the Sunshine Canyon City Side Landfill (City Side Landfill), and the Sunshine Canyon County Extension Landfill (County Extension Landfill), respectively. The City Side Landfill is located entirely within the City of Los Angeles, while the County Extension Landfill is about 1,000 feet to the northwest of the City Side Landfill, within the unincorporated territory of Los Angeles County (Figure 2).

3. The City Side Landfill started to receive MSW in 1958 and ceased landfill operations before September 1991. Like most municipal landfill operations at that time, the City Side Landfill does not have a liner or leachate collection and removal system (LCRS). The County Extension Landfill has been in operation since 1996 and currently receives an average of 6,000 tons of MSW per day. The County Extension Landfill is equipped with a composite liner system and a LCRS.

4. The two existing landfill units at the Facility are regulated by this Regional Board by two separate sets of Waste Discharge Requirements (WDRs). The City Side Landfill is regulated by WDRs adopted on November 23, 1987 (Order 87-158), while the County Extension Landfill is regulated by WDRs adopted on July 22, 1991 (Order No. 91-091).

5. The City Side Landfill is currently in the process of final closure in accordance with a Final Closure Plan (FCP) that was approved by the Executive Officer on July 15, 1997. The final cover of the City Side Landfill consists of a monolithic soil cover with a minimum thickness of six feet. Current final closure activities at the site includes placing additional soil on those portions of the final cover that are less than six feet and construction of a sediment basin at the entrance area of the Facility.

6. Pursuant to section 13304 of the California Water Code (CWC), the Executive Officer issued Cleanup and Abatement Order (CAO) No. R4-2002-0161 on November 4, 2002, requiring BFI to cleanup and abate the pollution of volatile organic compounds (VOCs) in groundwater at the City Side Landfill. The CAO prescribed an Evaluation Monitoring Program (EMP) for the site in accordance with section 20425 of California Code of Regulations, title 27 (27 CCR).

7. Following the implementation of an EMP, section 20385 of 27 CCR requires that a discharger institute a Corrective Action Program (CAP) when the Regional Board determines that the assessment of the nature and extent of a release and the design of a CAP have been satisfactorily completed. The recent detection of 1,4-dioxane in several groundwater monitoring wells at the City Side Landfill also requires the updating of the EMP.

8. As the County Extension Landfill will reach its design capacity soon (by approximately 2007), BFI has proposed an expansion of the Facility that will extend the landfill back to the City of Los Angeles territory. BFI has submitted an application to this Regional Board to apply for WDRs for the development of the first phase of the proposed landfill expansion, which is currently being evaluated by the Regional Board. Any WDRs adopted for the proposed landfill expansion may include a CAP for the existing City Side Landfill to fulfill the requirements of 27 CCR.

9. At a public hearing on September 11, 2003, the Regional Board decided to postpone the ruling on the proposed landfill expansion for 60 days. Given the uncertainty regarding the Board's action on the tentative WDRs for the proposed landfill expansion, a new CAO (this Order) is being issued to require a CAP for the City Side Landfill. This will allow BFI to begin implementing corrective measures to prevent further spread of the detected contamination at the site.

REGULATORY REQUIREMENTS

10. On June 17, 1993, the California State Water Resources Control Board (State Board) adopted Resolution No. 93-62, directing each Regional Board to revise the WDRs of each MSW landfill in its respective region to comply with the federal MSW regulations in part 258, title 40, of the Federal Code of Regulations (40 CFR part 258) that are more stringent than California State regulations. To comply with the Resolution, this Regional Board adopted Order No. 93-062 (also known as the Super Order) on September 27, 1993. Both the City Side Landfill and the County Extension Landfill were named in the Super Order. However, because the City Side Landfill stopped receiving wastes before October 9, 1991, the Federal regulations were not applicable to this unit (40 CFR part 258.1 (c)).

11. Pursuant to section 402 (p) of the Clean Water Act and 40 CFR parts 122, 123, and 124, the State Board adopted a National Pollutant Discharge Elimination System (NPDES) General Permit to regulate storm water discharges associated with industrial activities in California (State Board Order 97-03-DWQ). Storm water runoff from the Facility is currently regulated under the general NPDES permit (WDID No. 4 19S001306, enrolled on March 27, 1992). BFI is implementing a Storm Water Pollution Prevention Plan (SWPPP) at the Facility as required by the general NPDES permit.

12. Updated state regulations governing landfills are contained in 27 CCR, which became effective on July 18, 1997. These revised regulations clarified the roles and responsibilities of the California Integrated Waste Management Board (CIWMB) and the State Board, as well as the Regional Board, in regulating municipal solid waste disposal facilities. The 27 CCR regulations combine prior disposal site/landfill regulations of the CIWMB and State Board that were maintained in titles

14 and 23 of the California Code of Regulations. The requirements in this Order, as they are met, are in conformance with the relevant regulations of 27 CCR, 40 CFR part 258, and CWC.

ENVIRONMENTAL SETTING

13. The Facility is situated at the eastern end of the Santa Susana Mountains and the northern edge of the San Fernando Valley. Climatic conditions at the Facility are semi-arid. Rainfall typically occurs between November and April with little rainfall during the summer months. Average annual precipitation in the area is approximately 22.0 inches, with annual precipitation ranging from a high of 55.8 inches to a low of 10.2 inches. Average annual evaporation in the area is approximately 80 inches.

14. The Facility is surrounded by unincorporated areas of Los Angeles County to the north and west, and the communities of Granada Hills and Sylmar to the south and east. Land uses within 1,000 feet of the site include the County Extension Landfill to the northwest, undeveloped mountainous terrain to the south and southwest, an active oil production area to the south, freeways to the north and northeast, and open space and residential areas to the south and east. The O'Melveny Park of the City of Los Angeles is located to the west and southwest of the landfill property.

15. Three oil fields have been developed adjacent to the Facility site. The Newhall, Aliso Canyon, and Cascade Fields are located within one mile of the landfill property boundary. The Cascade Oil Field is located within 1,000 feet of the southwestern portion of the City Side Landfill. Approximately 96 oil/gas wells have been identified within the one-mile radius of the project site. Abandoned oil wells are occasionally encountered during development of the Facility.

16. The Facility site is underlain predominantly by marine sedimentary rocks of the Upper Miocene to Lower Pliocene-age Towsley Formation. The Pliocene-age Pico Formation outcrops in limited areas near the southern most portion of the facility. The Towsley and Pico Formation bedrock consist primarily of siltstone and fine-grained sandstone inter-bedded with lenses of coarse-grained sandstone and conglomerate. The bedrock units range from relatively fresh to highly weathered, with the degree of weathering generally decreasing with increasing depth below ground surface.

17. The bedrock units at the site are locally overlain by younger alluvial deposits including alluvium, colluvium, and/or landslide debris. The alluvial deposits occur primarily along the axis of the various sub-canyons that comprise Sunshine Canyon and consist of varying mixtures of unconsolidated sand, gravel, silt, and clay. The alluvial deposits are locally up to 30 feet thick. Substantial thickness of artificial fills have been placed in some areas of the Facility.

18. The bedrock formations beneath Sunshine Canyon are folded into a series of anticlines and synclines that plunge to the southeast. Near the southern margin of the Canyon, the bedrock units are truncated by several east-west trending faults, which dip steeply to the north beneath the southern portion of the facility. A second fault zone (designated as "Fault A") is located north of the City Side Landfill within the County Extension Landfill property. Several crude oil surface seeps associated with this fault zone were noted during previous construction of the County Extension Landfill. The faults that have been mapped at the site have been determined to be formed during the mid-Pleistocene period (i.e. 750,000 to 125,000 years ago).

19. The Facility is not underlain by a major groundwater basin. However, the northern boundary of the San Fernando Groundwater Basin, an important groundwater resource in this Region, is located approximately one mile to the south of the project site. Pollutants released from the landfill can potentially be carried out the canyon and reach the groundwater basin and cause pollution.

20. Groundwater beneath the Facility occurs in two main zones: a shallow, unconfined water bearing zone consisting of alluvial deposits and the upper weathered portion of the bedrock, and a deeper, locally confined water-bearing zone consisting primarily of relatively fresh bedrock materials. Hydraulic conductivity of the bedrock beneath Sunshine Canyon ranges from 10^{-3} to 10^{-9} centimeters per second (cm/sec) with values increasing with increasing weathering and fracturing density. The hydraulic conductivity of the alluvial deposits is estimated to be from 10^{-2} to 10^{-4} cm/sec.

21. The majority of groundwater flow beneath the Facility occurs within the alluvium and weathered bedrock near the canyon bottoms, generally following the pre-landfill construction topography. Groundwater flow within the canyon is generally to the southeast towards the mouth of the canyon and the velocity of groundwater flow within the alluvium is estimated to be from 0.04 to 4.4 ft/day.

22. There is an overall transition with depth from mostly Ca-$MgSO_4$ groundwater to mostly Na-HCO_3 groundwater at the site. The majority of the groundwater within the shallow water-bearing zone is a Ca-$MgSO_4$ type water with total dissolved solids (TDS) ranging from 2,000 to 4,000 mg/L. Groundwater within the unweathered bedrock zone is primarily a Na-HCO_3-SO_4 type water with TDS ranging from 1,000 to 3,000 mg/L. Because of high concentrations of salts and low yield, groundwater at the site is currently not used as a drinking water source.

23. Geographic variation of groundwater quality is substantial within the Facility. In general, concentrations of dissolved solids, particularly chloride, tend to be higher towards the mouth of the canyon. A study conducted by BFI between October 1994 and August 1996 ("chloride investigation") concluded that the observed differences in chloride concentrations between upgradient and downgradient groundwater monitoring wells at the facility were likely the result of upward migration of oilfield brine along fault fractures to the shallow groundwater.

24. The Facility is located within the Los Angeles River Watershed Basin. Surface water runoff originating in Sunshine Canyon exits through the mouth of the canyon where it proceeds to flow in a southerly direction into the San Fernando Valley, which is tributary to the Los Angeles River. The Los Angeles Reservoir, which stores water from the Los Angeles Aqueduct, is located approximately 1.5 miles to the southwest of the Facility.

25. The Facility site is identified as being in a Zone C area on the Flood Insurance Rate Map (FIRM) by the Federal Emergency Management Agency (FEMA) sponsored National Flood Insurance Program. Zone C includes areas of minimal flooding.

26. On June 13, 1994, this Regional Board adopted a revised *Water Quality Control Plan for the Coastal Watersheds of Los Angeles and Ventura Counties* (Basin Plan) which was amended on January 27, 1997 by Regional Board Resolution No. 97-02. The Basin Plan designates the following beneficial uses for groundwater within the San Fernando Groundwater Basin: municipal and domestic supply, agricultural supply, industrial process supply, and industrial service supply. The requirements in this Order, as they are met, are in conformance with the goals of the Basin Plan.

27. The final closure of the City Side Landfill will result in the removal of approximately 2.03 acres of wetlands. As required by 40 CFR 258.12, BFI has proposed compensatory mitigation measures to achieve no net loss of wetlands (defined by acreage and function) for the project by restoring existing degraded wetlands and creating additional manmade wetlands offsite. The compensatory

mitigation measures have been approved by this Regional Board and the U.S. Corps of Engineers, as provided by the Federal Clean Water Act, sections 401 and 404, respectively.

ENVIRONMENTAL MONITORING SYSTEMS

28. Groundwater monitoring at the City Side Landfill was first performed in 1986 as part of the Solid Waste Assessment Test (SWAT) investigation for the Facility. In 1988, a formal detection monitoring program (DMP) was established with the adoption of Board Order 87-158 and associated Monitoring and Reporting Program (M&RP) No. CI-2043. The existing water quality monitoring networks at the City Side Landfill include 19 groundwater monitoring wells, a groundwater extraction trench, four surface water monitoring stations, five lysimeters, three leachate monitoring wells, and 14 landfill gas probes (Figure 3).

29. The groundwater monitoring points at the site are divided into four general groups based on their locations and depths:

Property Boundary Wells: MW-1, MW-5, MW-6, and MW-7, MW-13. These are monitoring wells located at the down-gradient property boundary of the facility and are screened at the shallow groundwater zone;

Early-Warning Monitoring Points: MW-2A, MW-8, MW-9, MW-10, and the extraction trench. These monitoring wells are located in the area between the City Side Landfill footprint and the down-gradient property boundary and are screened at the shallow groundwater zone;

Deep Monitoring Wells: DW-1, DW-2, DW-3, DW-4, and MW-2B. These are monitoring wells that are located in the area between the City Side Landfill footprint and the property boundary and screened within the deep groundwater zone; and

Upgradient Monitoring Wells: MW-4, MW-11, MW-12, CM-5, and CM-9R3. These wells are located upgradient of the City Side Landfill within the shallow groundwater zone. With the exception of MW-4, all these upgradient wells are monitored under the WDRs for the County Extension Landfill (Order No. 91-091, M&RP No. CI-7059).

30. As required by the Regional Board under the SWAT program, BFI installed four leachate monitoring wells in 1988, identified as LR-1 through LR-4 on Figure 3, to collect leachate samples from the City Side Landfill. After the SWAT investigation, BFI voluntarily continued the monitoring of these leachate wells. However, most of these leachate monitoring wells are dry or damaged, except for LR-2, from which leachate samples have been obtained during the majority of the sampling events.

31. In 1990, BFI installed a permeable extraction trench across the main alluvial channel downgradient of the City Side Landfill. The structure was keyed into unweathered bedrock and was installed to minimize the potential of offsite migration of groundwater through the alluvial groundwater zone. Groundwater collected at the trench has been regularly monitored for possible contamination and used onsite for irrigation and dust control since 1997.

32. Besides the groundwater monitoring wells and the trench, BFI also installed five lysimeters (LY-1, LY-2, LY-3, LY-4, and LY-5) within the unsaturated zone at the City Side Landfill in an effort to collect soil pore liquid samples. However, these lysimeters are almost always dry and no liquid samples have been obtained from them.

33. As required by the South Coast Air Quality Management District (SCAQMD), BFI has installed 14 gas probes (GP-1 through GP-14) within the unsaturated zone around the City Side Landfill for field methane gas monitoring. These gas probes are also utilized to monitor volatile organic compounds in landfill gas that may cause contamination to groundwater.

34. Surface water from the upper reaches of Sunshine Canyon is collected in a sedimentation basin next to the County Extension Landfill. Drainage from the basin travels southerly in an unlined stream channel between the two parts of the City Side Landfill to the entrance of the Canyon, where the water flows offsite into the Los Angeles City flood control system. Surface water quality at the site is monitored at four sampling stations identified as S-A, S-B, S-C, and S-D. Additionally, stormwater runoff at the site is sampled during at least two storm events per year under the NPDES General Stormwater Permit.

35. Landfill gas (LFG) at the City Side Landfill is collected by a network of approximately 110 LFG collection wells and collection pipelines, and is combusted at a LFG flare station onsite in accordance with SCAQMD regulations. Landfill gas condensate collected at the City Side Landfill is discharged to the City of Los Angeles sanitary sewer system in accordance with sewer discharge requirements established by the City of Los Angeles Industrial Waste Division for the Facility.

KNOWN GROUNDWATER CONTAMINATION AND PROPOSED CORRECTIVE ACTION PROGRAM (CAP)

36. Volatile organic compounds (VOCs) have been detected at monitoring well MW-10, which is a shallow groundwater monitoring well located approximately 180 feet east of the City Side Landfill footprint (see Figure 3). The monitoring well was installed in 1993 to assist in the evaluation of groundwater conditions downgradient of the City Side Landfill. Shortly after installation, low levels of VOCs were detected in water samples from the well. Since 1994, groundwater samples from the well have consistently contained one or more of the following VOCs: 1,1-dichloroethane (1,1-DCA), dichlorodifluoromethane (CFC12), trichloroethane (TCE), chloroethane, and trichloro-fluoromethane (CFC 11).

37. Subsequent investigation by BFI concluded that the VOCs detected at MW-10 were the result of LFG impacts to groundwater. In December 1996, BFI submitted a workplan that included activities to adjust the LFG collection system at the landfill. The result of ongoing groundwater monitoring activities conducted since 1997 indicate that the repairs and upgrades to the LFG collection system have significantly reduced both the number and magnitude of the VOC detections at MW-10. However, detections of 1,1-DCA have continued to occur sporadically in the well, although the concentrations have been much lower than the 5 micrograms per litter (µg/l) maximum contamination level (MCL) for drinking water. The consistent detection of 1,1-DCA at MW-10 constitutes "measurably significant" evidence of a release from the landfill as defined in section 20164 of 27 CCR.

38. Besides the detection of VOCs at monitoring MW-10, groundwater water monitoring data also indicates that concentrations of total dissolved solids (TDS), chloride, sulfate, and some other inorganic constituents are generally higher in downgradient monitoring wells than in upgradient wells for the City Side Landfill. Statistical exceedances of inorganic constituents have often been observed at the down-gradient monitoring wells referred as the Extraction Trench Area. While most of such statistical exceedances may be attributed to geographic variation, the possibility of such pollutants being released from the City Side Landfill cannot be ruled out.

39. Under an internal program initiated by this Regional Board, BFI conducted a one-time sampling event for emergent chemicals including perchlorate, m-nitrosodimethylamine (NDMA), 1,4-dioxane, 1,2,3,-trichloropropane (TCPA), chromium, and hexavalent chromium (chromium-6) at both the City Side Landfill and the County Extension Landfill and submitted its reports of these investigations to the Regional Board on June 23, 2003. The reports indicate 1,4-dioxane was detected in leachate samples from both the County Extension Landfill and the City Side Landfill and three groundwater monitoring wells at the City Side landfill, as well as in the groundwater extraction trench. The detection of 1,4-dioxane in groundwater at the City Side Landfill represents additional "measurably significant" evidence of a release from the landfill as defined in section 20164 of 27 CCR.

40. In accordance with the requirements of CAO No. R4-2002-0161, BFI submitted a technical report to this Regional Board on February 14, 2003. The report includes a delineation assessment that addresses the detection of VOCs in monitoring well MW-10 and the statistical exceedances of inorganic constituents in the Extraction Trench Area, an updated Engineering Feasibility Study (EFS), and an amended Report of Waste Discharge (AROWD). The EFS and AROWD proposed corrective action measures that could be taken to achieve background water quality standards at the site.

41. In accordance with the requirements of CAO No. R4-2002-0161, BFI also submitted a document entitled "Proposed Data Evaluation Methods for Groundwater and Surface Water Monitoring" to this Regional Board on February 14, 2003. This report includes "initial concentration limits" of constituents of concerns (COCs) calculated from available water quality data. These initial concentration limits are used in this Order to establish site-specific water quality protection standards (WQPS) at the City Side Landfill.

42. On August 11, 2003, BFI submitted another AROWD to this Regional Board and proposed a CAP that includes corrective measures for the remediation of groundwater that has been impacted by pollutants released from the landfill. These corrective measures include the construction of an impermeable subsurface barrier (cutoff wall) across the mouth of the Sunshine Canyon, installation and operation of extraction wells to remove groundwater from behind the cutoff wall, upgrading and continuing operation of the existing groundwater extraction trench, ongoing upgrades and operation of the landfill gas collection system, and modification to the groundwater monitoring system. This Order is issued to BFI to require the implementation of a CAP at the City Side Landfill.

43. The issuance of this Order is authorized by section 13304 of the CWC, which states, in part, that:

> "Any person…who has caused or permitted, causes or permits, or threatens to cause or permit any waste to be discharged or deposited where it is, or probably will be, discharged into the waters of the state and creates, or threatens to create, a condition of pollution or nuisance, shall upon order of the regional board, clean up the waste or abate the effects of the waste, or, in the case of threatened pollution or nuisance, take other necessary remedial action."

44. This action is being taken for the protection of the environment and as such is exempt from the provisions of the California Environmental Quality Act (CEQA) (Public Resources Code §21000 et seq.) in accordance with 14 CCR, section 15321.

45. In accordance with the Governor's Executive Order No. D-22-01, dated February 8, 2001, requiring any proposed activity to be reviewed to determine whether such activity will cause additional

energy usage, Regional Board staff have determined that implementation of this CAO will not result in a significant change in energy usage.

IT IS HEREBY ORDERED pursuant to section 13304 of the CWC that BFI shall adequately assess, monitor, report, cleanup, and abate the pollution of groundwater at the City Side Landfill by taking action specified as follows:

A. Reports

All technical and monitoring reports to be submitted pursuant to this Order are being required pursuant to section 13267 of the CWC. Failure to submit reports in accordance with schedules established by this Order or attachments to this Order, or failure to submit a report of sufficient technical quality to be acceptable to the Executive Officer may subject BFI to enforcement action pursuant to section 13268 of the CWC.

B. Corrective Action Program (CAP)

1. BFI shall implement a CAP at the City Side Landfill as proposed in the AROWD that was submitted to the Regional Board on August 11, 2003. Pursuant to section 20430 of 27 CCR, the Regional Board may require BFI to submit amended reports of waste discharge to make appropriate changes to the CAP.

2. At minimum, the CAP shall include the construction of an impermeable subsurface barrier (cutoff wall) across the mouth of the Sunshine Canyon, installation and operation of extraction wells to remove groundwater from behind the cutoff wall, upgrading and continuing operation of the existing groundwater extraction trench, ongoing upgrades and operation of the landfill gas collection system, and modification of the groundwater monitoring system.

3. Within 30 days of the date of this Order, BFI shall submit a detailed construction plan, for the Executive Officer's approval, that outlines all construction activities, including the decommissioning and installation of groundwater wells, that are proposed in the August 11, 2003 AROWD. The plan shall ensure that the construction of the sediment basin that is required under the FCP, which will be located in the same area as the groundwater extraction trench and the proposed cutoff wall, will not impact the integrity of the CAP measures.

C. Continuous Delineation of Release

In accordance with 27 CCR section 20425, BFI shall collect and analyze all data necessary to assess the nature and extent of pollutant release from the City Side Landfill. This assessment shall include a determination of the spatial distribution and concentration of 1,4-dioxane and other COCs throughout the zone affected by the release. BFI shall complete and submit this assessment within 90 days from the date of this Order.

D. Water Quality Protection Standards

1. In accordance with 27 CCR section 20390, the water quality protection standards (WQPS) for the City Side Landfill are established as the natural background groundwater quality at the site, which is set to either the statistically predicted value (if the constituent naturally exists) or the laboratory detection limit (if the constituent does not naturally exist in the water). WQPS that have been calculated based on available water quality data are included in M&RP

No. CI-2043. BFI shall update the water quality standards at least every two years based on concurrent monitoring data, as required by the M&RP.

2. The compliance point(s) where WQPSs apply shall be located along downgradient edges of waste management facilities at the Landfill or an alternate location approved by the Executive Officer.

3. The compliance period for which WQPSs are applicable shall be the entire active life of a waste management facility, and during the closure and postclosure maintenance periods.

E. Monitoring and Reporting Program (M&RP)

1. In accordance with 27 CCR, section 20425, M&RP No. CI-2043 is hereby revised to include requirements of CAP measures in response to the detection of landfill related pollutants in groundwater. The revised M&RP, which is attached to this Order as Attachment T and incorporated herein by reference, shall replace the existing M&RP that was attached to CAO No. R4-2002-0161. BFI shall start implementing the program 30 days from the date of this Order.

2. At any time, BFI may file a written request, including appropriate supporting documents, with the Executive Officer, proposing modifications to M&RP No. CI-2043. BFI shall implement any changes in the revised M&RP approved by the Executive Officer upon receipt of a signed copy of the revised M&RP.

3. Unless otherwise approved by the Executive Officer, all analyses shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. All analyses shall be conducted in accordance with the latest edition of "*Test Methods for Evaluating Physical/Chemical Methods*" (SW-846) promulgated by the United States Environmental Protection Agency.

4. BFI shall furnish, under penalty of perjury, technical or monitoring program reports in accordance with CWC section 13267. Failure or refusal to furnish these reports or falsifying any information provided therein renders BFI guilty of a misdemeanor and subject to the penalties stated in CWC section 13268. Monitoring reports shall be submitted in accordance with the specifications contained in M&RP No. CI-2043, as directed by the Executive Officer. Additionally, monitoring reports shall be prepared and signed by a registered civil engineer or registered geologist. M&RP No. CI-2043 is subject to periodic revisions as warranted and approved by the Executive Officer.

5. The effectiveness of all monitoring wells, monitoring devices, and leachate and gas collection systems at the Landfill shall be maintained at all times, including the postclosure maintenance period in accordance with acceptable industry standards. BFI shall maintain a Monitoring Well Preventative Maintenance Program approved by the Executive Officer for the Landfill. Elements of the program shall include, as a minimum, periodic visual inspections of well integrity, pump removal and inspection, and appropriate inspection frequencies. Within 60 days of the adoption of this Order, BFI shall submit an updated Monitoring Well Preventative Maintenance Program to the Regional Board to be approved by the Executive Officer.

6. If a well or piezometer is found to be inoperative, the Regional Board and other interested agencies shall be so informed in writing within seven days of such discovery and this

notification shall contain a time schedule for returning the well to operating order. Changes to the existing monitoring program shall be submitted for Executive Officer approval at least 30 days prior to implementing the change(s).

7. If a well or piezometer is proposed to replace an inoperative well or piezometer identified in the "Monitoring Well Preventative Maintenance Program", BFI shall not delay replacement while waiting for Executive Officer approval. However, a technical report describing the location and construction details shall be submitted to the Executive Officer within 30 days.

8. BFI shall provide for proper handling and disposal of water purged from monitoring wells at the Landfill during sampling. Water purged from a monitoring well shall not be returned to that well (or any other monitoring well).

9. For any monitoring wells installed at the Landfill in the future, BFI shall submit technical reports for approval by the Executive Officer prior to installation. These technical reports shall be submitted at least 60 days prior to the anticipated date of installation of the wells. These reports shall be accompanied by:

    a. Maps and cross sections showing the locations of the monitoring points; and

    b. Drawings and data showing construction details of the monitoring points. These data shall include:

        i. casing and test hole diameter;
        ii. casing materials;
        iii. depth of each hole;
        iv. the means by which the size and position of perforations shall be determined, or verified, if in the field;
        v. method of joining sections of casing;
        vi. nature of filter materials;
        vii. depth and composition of soils; and
        viii. method and length of time of well development.

10. Compliance monitoring wells at the Landfill are specified in M&RP No. CI-2043. Monitoring wells that are not included in the current monitoring program shall be placed on standby status. All monitoring wells shall be monitored pursuant to this Order and as directed by the Executive Officer through future revisions of the M&RP.

11. BFI shall install any additional groundwater, soil pore liquid, soil pore gas, or leachate monitoring devices necessary to comply with M&RP No. CI-2043 as adopted or as revised by the Executive Officer.

F. Final Closure and Postclosure Maintenance

1. Within 180 days of this Order, BFI shall complete all final closure construction activities at the City Side Landfill in accordance with the FCP, including the construction of the sediment basin at the entrance area of the site. A construction quality assurance (CQA) report for the final closure shall be submitted to the Regional Board within 60 days of the completion of final closure construction activities.

2. BFI has a continuing responsibility for correcting any problems which may arise in the future at the City Side Landfill, including problems resulting from gases and leachate, or by infiltration of water applied to this Facility during subsequent use of the land or other purposes.

3. 27 CCR, section 21890(b), provides that postclosure maintenance plans may be revised during the postclosure maintenance period upon concurrence with the enforcement agency (EA) and approval by the CIWMB and the Regional Board. Within 180 days of the adoption of this Order, BFI shall, with the concurrence of the EA and CIWMB, submit a revised postclosure maintenance plan for the City Side Landfill to reflect the current site conditions.

G. Existing WDRs

This Order is designed to bring BFI into compliance with 27 CCR through the establishment of a CAP at the City Side Landfill. It does not rescind Regional Board Order No. 87-158, which includes WDRs for the site. BFI shall continue implementing all applicable requirements in Order No. 87-158, except for the M&RP changes that have been made by Attachment T of this Order. If any applicable requirements overlap or conflict in any manner, the most protective requirement for water quality shall govern in all cases, unless specifically directed by the Executive Officer.

H. General NPDES Stormwater Permit

BFI shall continue implementing the NPDES Stormwater General Permit at the City Side Landfill. Besides regularly reporting under the General Permit, BFI shall report and discuss any noncompliance of the General Permit in the Semi-Annual and Annual Reports required by the M&RP. The analytical data of stormwater runoff that are required by the General Permit shall also be included in the semi-annual and annual reports required under the M&RP.

I. Other Requirements

1. This Order in no way limits the authority of this Regional Board, as contained in the CWC, to require additional investigation and cleanup pertinent to the Facility. This Order may be revised by the Executive Officer as additional information becomes available.

2. At any time, BFI may file a written request (including appropriate supporting documents) with the Executive Officer proposing modifications to the M&RP. The Executive Officer shall either reject the proposal for reasons listed or shall incorporate it into a revised M&RP. BFI shall implement any changes in the M&RP proposed by the Executive Officer upon receipt of a revised M&RP.

3. For good cause shown, the Executive Officer may grant an extension of time as to the deadlines provided herein. Any request for such an extension, however, must be made in writing and submitted prior to the deadline.

4. Failure to comply with the terms and conditions of this Order may result in the imposition of civil liability, either administratively by this Regional Board or judicially by the Superior Court, in accordance with section 13350 et seq. of the CWC and/or referral to the Attorney General of the State of California for such legal action as he or she may deem appropriate.

5. Pursuant to section 13320 of the CWC, an aggrieved person may seek review of this Order by filing a petition within 30 days of the date of this Order with the State Board. The petition must be sent to the SWRCB, P.O. Box 100, Sacramento, CA, 95812.

I. Rescissions

Except for enforcement purposes, Regional Board CAO No. R4-2002-0161 issued on November 4, 2002, is hereby rescinded.

ORDERED BY: _____ DATE: October 17, 2003

Dennis A. Dickerson
Executive Officer

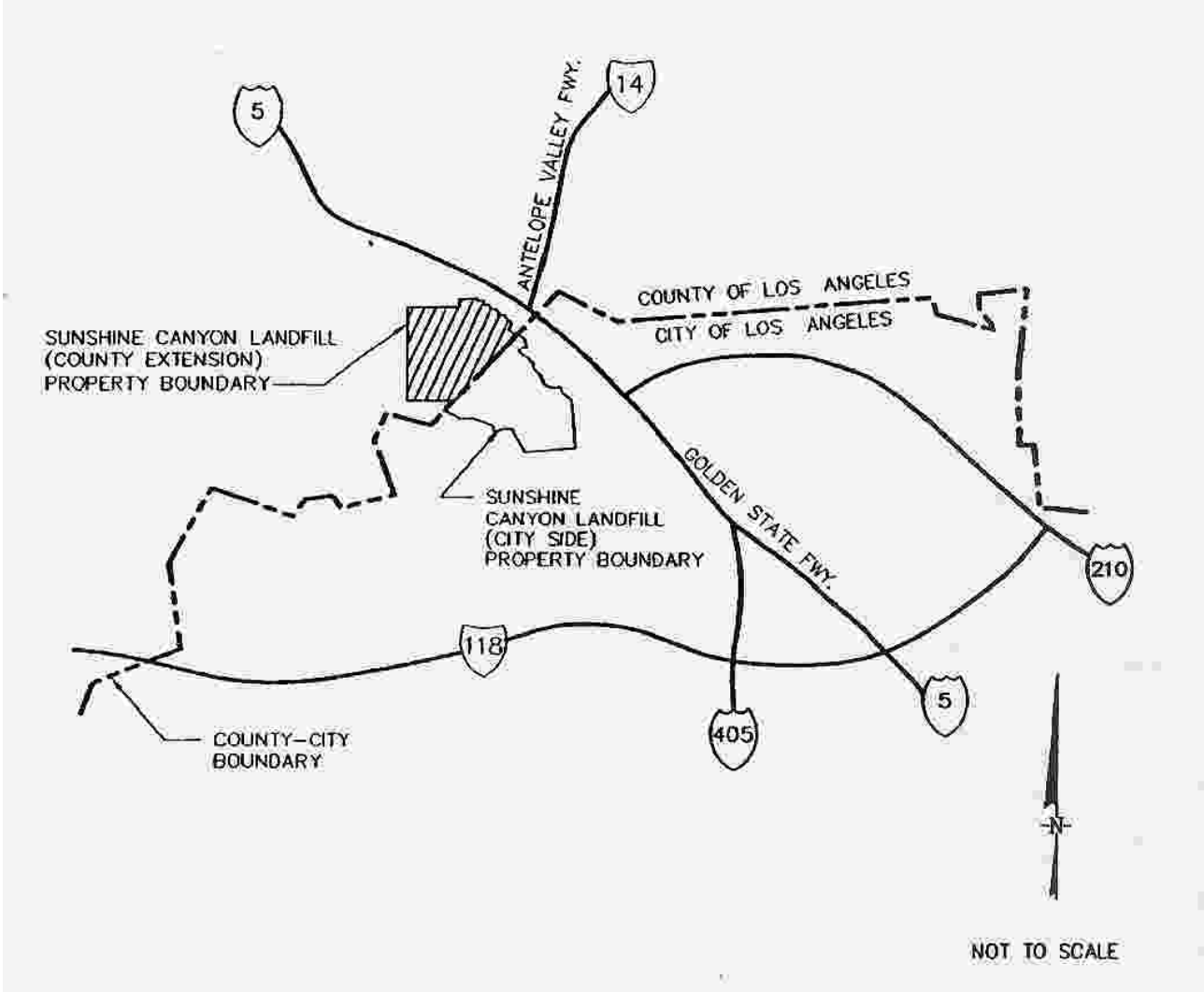

Figure 1. Location Map

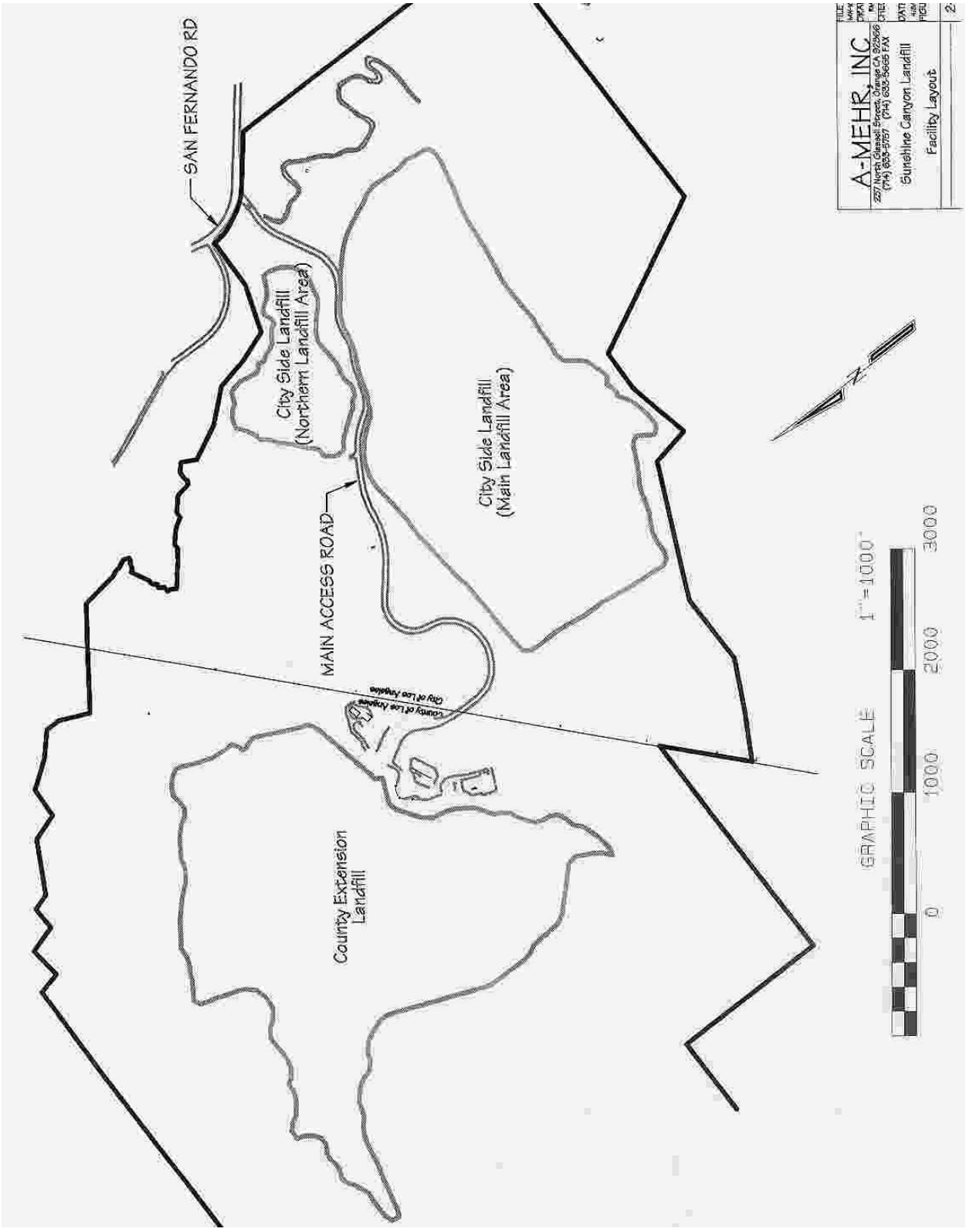

Figure 2. Existing Facilities

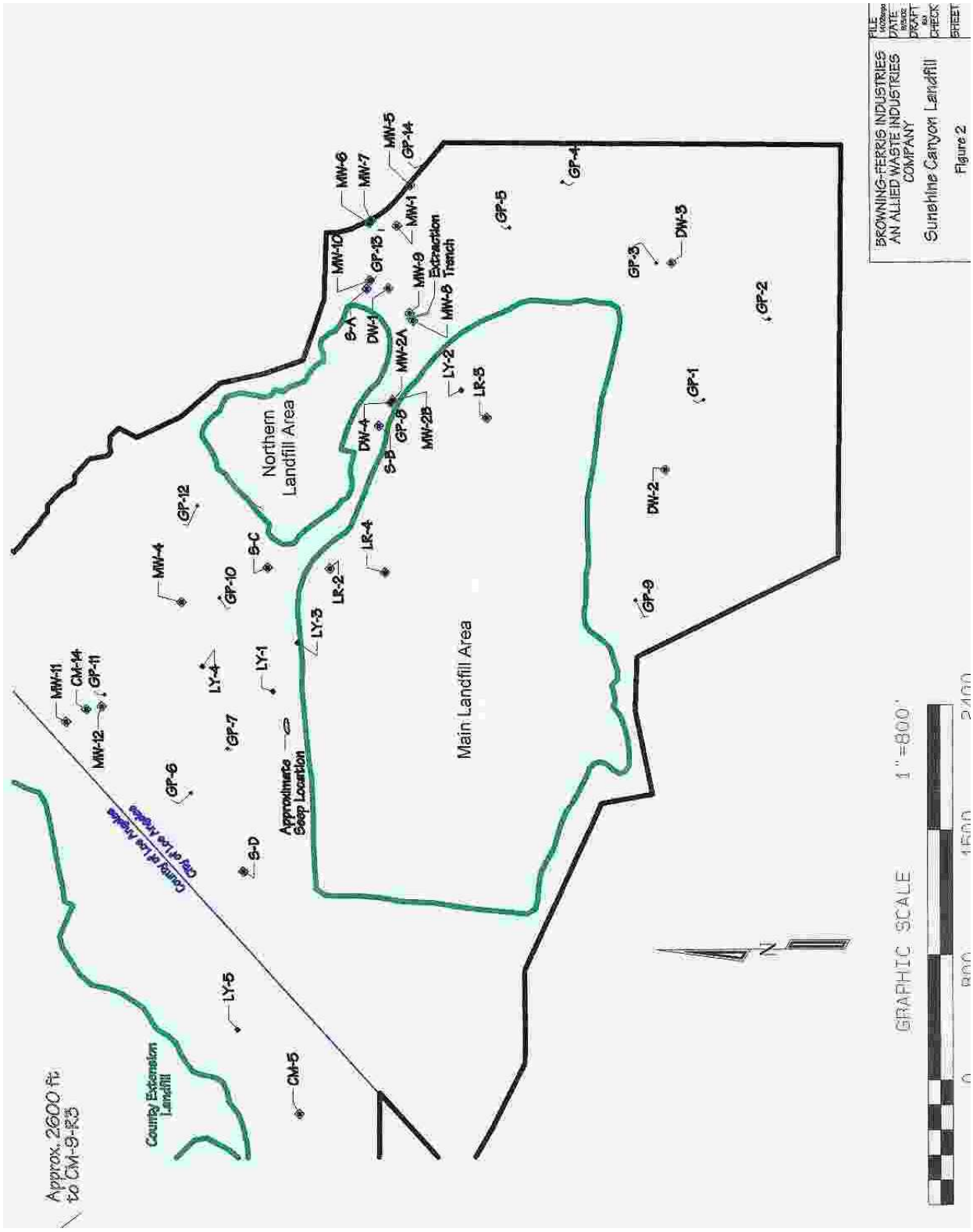

Figure 3. Existing Environmental Monitoring System